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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,594	03/14/2006	Thomas Walther	4100-380PUS	5772
27799 7590 11/07/2008 COHEN, PONTANI, LIEBERMAN & PAVANE LLP 551 FIFTH AVENUE SUITE 1210 NEW YORK, NY 10176				
EXAMINER				
ANGWIN, DAVID PATRICK				
ART UNIT		PAPER NUMBER		
3729				
MAIL DATE		DELIVERY MODE		
11/07/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/566,594

**Applicant(s)**

WALTHER ET AL.

**Examiner**

DAVID P. ANGIN

**Art Unit**

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### **Claim Rejections – 35 USC § 103**

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically taught or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 25-26** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831).

- a. *Brady et al* teaches the following in his reference:
- i. applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label on a printing material (2:17-28; Fig. 5);
  - ii. a conductive paste is used to form conductors (2:19-20);

- b. Regarding claim 25, in addition to the above limitations, *Brady et al* does not expressly disclose applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label by printing conductor tracks on a printing material.
- i. However, *Howard et al* teaches in his reference applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label by printing conductor tracks on a printing material (7:45-52). The advantage of printing both the antenna and the circuit is to avoid an additional step of having to connect additional circuitry to the substrate. Thus, it would have been obvious to print both the antenna and the circuit to avoid an additional step of having to connect additional circuitry to the substrate.
- c. Regarding claim 25, in addition to the above limitations, *Brady et al* as modified not expressly disclose in his reference applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label by printing conductor tracks on a printing material by sheet-fed offset printing.
- i. However, *Babb* teaches in her reference applying at least parts of an antenna required for functioning of a circuit by printing conductor tracks on a printing material by sheet-fed offset printing (1:35-40). The advantage of utilizing sheet-fed offset printing is to avoid scrapping multiple parts when a defective part is made because each part is printed separately. Therefore, it would have been obvious to utilize sheet-fed offset printing to avoid scrapping multiple parts when a defective part is made because each part is printed separately.
- b. Regarding claim 26, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly teach in his reference printing the conductor tracks.

- i. However, *Howard et al* further teaches printing conductor tracks (7:45-52). The advantage of printing conductor tracks is to avoid an additional step of having to connect additional circuitry to the substrate. Therefore, it would have been obvious to print conductor tracks to avoid an additional step of having to connect additional circuitry to the substrate.

**Claims 27** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Tuttle* (US Patent 6,037,879).

- a. Regarding claim 27, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference conductive printing ink having metallic particles is used for printing the conductor tracks.
- i. However, *Tuttle et al* teaches in his reference conductive printing ink having metallic particles used for printing conductor tracks (6:30-40). The advantage of using conductive printing ink having metallic particles to print the conductor tracks is to avoid the step of having to connect additional circuitry to the substrate. Therefore, it would have been obvious to use conductive printing ink having metallic particles to print the conductor tracks to avoid the step of having to connect additional circuitry to the substrate.

**Claim 28** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Monico* (US Patent 6,259,369).

- a. Regarding claim 28, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference using the conductive

printing ink having carbon black or carbon fibers for printing the conductor traces.

- i. However, *Monico et al* teaches in his reference using conductive printing ink having carbon black or carbon fibers for printing the conductor traces (5:41-45). The advantage of using conductive printing ink having carbon black or carbon fibers to make the conductive traces is to make the ink transparent and avoid being detected by the human eye. Therefore, it would have been obvious to use conductive printing ink having carbon black or carbon fibers to make the conductive traces to make the ink transparent and avoid being detected by the human eye.

**Claim 29** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Weisgerber* (US Patent 4,781,370).

- a. Regarding claim 28, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the conductor tracks are applied in a sheet-fed offset press having a gripper transport means.
  - i. However, *Weisgerber* teaches in his reference sheets fed into a sheet-fed offset type press having a gripper transport means (Fig. 1). The advantage of utilizing a gripper transport means is to securely grasp the workpiece. Therefore, it would have been obvious to utilize a gripper transport means to securely grasp the workpiece.

**Claim 30** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Sarda* (US Patent 4,815,376).

- a. Regarding claim 30, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the conductor tracks are applied within a web-fed offset press.
- i. However, *Sarda* teaches in his reference sheets fed into a web-fed offset press (Figs. 6 and 7). The advantage of utilizing a web-fed offset press is to produce higher throughput. Therefore, it would have been obvious to utilize a web-fed offset press is to produce higher throughput.

**Claim 31** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392), *Babb* (US Patent 6,429,831), and *Weisgerber* (US Patent 4,781,370) and further in view of *Robertz et al* (US Patent 6,206,292).

- a. Regarding claim 31, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference the step of applying comprises applying the parts of the antenna and the tuned circuit to a rear side of the printing material, and subsequently turning the printing material over in a turner device.
- i. However, *Robertz et al* teaches in his reference the step of applying comprises applying the parts of the antenna and the tuned circuit to a rear side of the printing material, and subsequently turning the printing material over in a turner device (2:31-34). The advantage of turning the printing material over is to add circuitry to the other side of the printing material. Therefore, it would have been obvious to turn the printing material over to add circuitry to the other side of the printing material.

**Claims 32-33** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Grabau et al* (US Patent 6,147,662).

- a. Regarding claim 32, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the step of applying a protective varnish or a protective ink to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material.
  - i. However, *Grabau* teaches the following in his reference that the step of applying a protective varnish or a protective ink to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material (6:28-67). The advantage of adding a protective varnish or a protective ink to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material is to protect the circuitry from mechanical damage. Therefore, it would have been obvious to add a protective varnish or a protective ink to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material to protect the circuitry from mechanical damage
- b. Regarding claim 33, in addition to the limitations in claim 32, *Brady et al* as modified does not expressly disclose in his reference that the protective varnish or the protective ink is applied using a sheet-fed offset printing method.
  - i. However, *Babb* teaches that the protective varnish or the protective ink is applied using a sheet-fed offset printing method (1:44-47). The advantage of adding a protective varnish or a protective ink utilizing a sheet-fed press is to add the protective coating by



utilizing the same equipment as was utilized to make the conductive traces. Therefore, it would have been obvious to add a protective varnish or a protective ink utilizing a sheet-fed press to add the protective coating by utilizing the same equipment as was utilized to make the conductive traces.

**Claims 34 and 36-38** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Vega et al* (US Patent 6,265,977).

- a. Regarding claim 34, in addition to the limitations in claim 25 and already listed, *Brady et al* as modified does not expressly disclose in his reference that the step of applying a protective varnish to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material wherein the protective varnish is applied.
- i. However, *Babb* teaches the step of applying a protective varnish to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material wherein the protective varnish is applied (1:44-47). The advantage of applying a protective varnish to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material wherein the protective varnish is applied is to protect the antenna and circuitry in the most efficient manner. Therefore, it would have been obvious to apply a protective varnish to the printing material after the parts of the antenna and the tuned circuit are applied to the printing material wherein the protective varnish is applied to protect the antenna and circuitry in the most efficient manner.
- b. Regarding claim 34, in addition to the limitations in claim 25 and already listed, *Brady et al* as modified does not expressly disclose in his reference

that the step of applying ink to the printing material by using a flexographic printing unit.

- i. However, *Vega et al* teaches in his reference that the step of applying ink to the printing material by using a flexographic printing unit (3:12-18; the examiner notes that a flexographic printing unit has a chamber type doctor and engraved roll is inherent). The advantage of utilizing a flexographic printing unit is to print onto a thin and flexible substrate. Therefore, it would have been obvious to utilize a flexographic printing unit to print onto a thin and flexible substrate.
- c. Regarding claim 36, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the printing material is a fibrous material.
  - i. However, *Vega et al* further teaches in his reference that the printing material is paper (5:9-21; the examiner notes that paper is known to be a fibrous material). The advantage of utilizing paper is to print on a substrate that is inexpensive and commonly used. Therefore, it would have been obvious to utilize paper to print on a substrate that is inexpensive and commonly used.
- d. Regarding claim 37, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose that the printing material is a film.
  - i. However, *Vega et al* teaches in his reference that the printing material is a polymer (5:9-21; the examiner notes that polymers are known to be films). The advantage of utilizing a film is to print conductive traces on a reusable and durable substrate (5:17-21). Therefore, it would have been obvious to utilize a film to print conductive traces on a reusable and durable substrate.
- e. Regarding claim 38, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the printing

material is a woven fabric made from at least one of natural and synthetic fibers.

- i. However, *Vega et al* further teaches in his reference that the printing material is polyester (5:9-21; the examiner notes that polyester is known to be a woven fabric material made of synthetic fibers). The advantage of utilizing a woven fabric is to print on a substrate that is reusable and durable. Therefore, it would have been obvious to utilize a woven fabric to print on a substrate that is reusable and durable.

**Claim 35** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Feesler* (US Patent 6,343,550).

- a. Regarding claim 35, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose that the protective varnish is applied via a two-roll flexographic printing unit.

- i. However, *Feesler* teaches in his reference that the varnish is applied via a two-roll flexographic printing unit (1:41-43). The advantage of utilizing a two-roll flexographic printing unit is to make use of a machine that is widespread and whose capabilities are well known. Therefore, it would have been obvious to utilize a two-roll flexographic printing unit to make use of a machine that is widespread and whose capabilities are well known.

**Claim 39** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Gron et al* (US Patent 6,712,931).

- a. Regarding claim 39, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the printing material is an absorbent printing material, the method further comprising one of precoating, prevarnishing or preprinting the printing materials with a

varnish or a preprinting ink to reduce absorption properties of the printing material.

- i. However, *Gron et al* teaches in his reference that the printing material is an absorbent printing material, the method further comprising one of precoating, prevarnishing or preprinting the printing materials with a varnish or a preprinting ink to reduce absorption properties of the printing material (3:50-4:15). The advantage of utilizing a precoating is to reduce absorption properties of the printing material (3:61-66). Therefore, it would have been obvious to utilize a precoating to reduce absorption properties of the printing material.

**Claim 40** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Babb* (US Patent 6,429,831), and *Gron et al* (US Patent 6,712,931) and further in view of *Yoshida et al* (US Patent 4,933,123).

- a. Regarding claim 40, in addition to the limitations in claim 39, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevarnishing, or preprinting is performed by a direct letterpress printing unit.
  - i. However, *Yoshida et al* teaches in his reference applying ink utilizing a direct letterpress printing unit (5:54-57). The advantage of utilizing a direct letterpress unit is to utilize a well-known process. Therefore, it would have been obvious to utilize a direct letterpress unit to utilize a well-known process.

**Claim 41** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Babb* (US

Patent 6,429,831), and *Gron et al* (US Patent 6,712,931) and further in view of *Horiguchi et al* (US Patent 5,617,788).

- a. Regarding claim 41, in addition to the limitations in claim 39, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevarnishing or preprinting includes applying the varnish or ink using a relief printing plate and a rubber-covered cylinder.
- i. However, *Horiguchi et al* teaches in his reference that the step of precoating, prevarnishing or preprinting includes applying the varnish or ink using a relief printing plate and a rubber-covered cylinder (1:45-50). The advantage of precoating utilizing a relief printing plate is to utilize a printing process that it is a well known. Therefore, it would have been obvious to precoat utilizing a relief printing plate to utilize a printing process that it is a well known.

**Claim 42** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Babb* (US Patent 6,429,831), and *Gron et al* (US Patent 6,712,931) and further in view of *Vega et al* (US Patent 6,265,977).

- a. Regarding claim 42, in addition to the limitations in claim 39, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevarnishing or preprinting includes applying the varnish or ink using an offset printing unit.
- i. However, *Vega et al* teaches in his reference that the step of precoating, prevarnishing or preprinting includes applying the varnish or ink using an offset printing unit (7:18-26). The advantage of precoating utilizing offset printing is to utilize a printing process that it is a well known. Therefore, it would have been

obvious to precoat utilizing offset printing to utilize a printing process that it is a well known.

**Claim 43** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Shoobridge et al* (US Patent 6,603,400).

- a. Regarding claim 43, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the step of printing two lines next to one another over a distance to produce a capacitive element, the lines being connected to one another at the ends of a short line of the two lines.
  - i. However, *Shoobridge et al* teaches in his reference that the step of printing two lines next to one another over a distance to produce a capacitive element, the lines being connected to one another at the ends of a short line of the two lines (1:57-2:11; Fig. 2). The advantage of printing capacitors is to avoid the step of attaching a capacitor to the substrate. Therefore, it would have been obvious to print capacitors to avoid the step of attaching a capacitor to the substrate.

**Claim 44** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Babb* (US Patent 6,429,831) and further in view of *Redinger et al* (non-patent literature).

- a. Regarding claim 44, in addition to the limitations in claim 25, *Brady et al* as modified does not expressly disclose in his reference that the step of producing a capacitive element by printing a base line on the printing material, printing an insulator, and printing a complementary line on the

insulator so that the insulator is arranged between the base line and the complementary line.

- i. However, *Redinger et al* teaches in his reference that the step of producing a capacitive element by printing a base line on the printing material, printing an insulator, and printing a complementary line on the insulator so that the insulator is arranged between the base line and the complementary line (*Redinger, J.*, "An all-printed passive component technology for low-cost RFID", Device Research Conference Digest 2003; pp. 187-188). The advantage of printing capacitors and dielectrics is to avoid the step of attaching a capacitor along with a dielectric to the substrate. Therefore, it would have been obvious to print capacitors and dielectrics to avoid the step of attaching a capacitor along with a dielectric to the substrate.

**Claim 45** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Yokota et al* (US Patent 7,029,825).

- a. *Brady et al* teaches the following in his reference:
  - i. applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label on a printing material (2:17-28; Fig. 5).
- b. *Brady et al* does not expressly teach in his reference applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label by printing conductor tracks on a printing material by using a relief printing plate.
  - i. However, *Howard et al* teaches in his reference applying at least parts of an antenna and a tuned circuit required for functioning of the RFID label by printing conductor tracks on a printing material (7:45-52). The advantage of printing both the antenna and the circuit is to avoid an additional step of having to connect additional

circuitry to the substrate. Therefore, it would have been obvious to print both the antenna and the circuit to avoid an additional step of having to connect additional circuitry to the substrate.

- c. In addition to the above limitations, *Brady et al* as modified does not expressly disclose in his reference patterning conductive material by using a relief printing plate.
- i. However, *Yokota et al* teaches in his reference patterning conductive material by using a relief printing plate (38:3-8). The advantage of utilizing a relief printing plate to pattern conductors is to utilize a printing process that it is a well known. Therefore, it would have been obvious to utilize a relief printing plate to pattern conductors to utilize a printing process that it is a well known.

**Claims 46-49** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Yokota* (US Patent 7,029,825) and further in view of *Scholz et al* (US Patent 6,371,024).

- a. Regarding claim 46, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the relief printing plate is clamped onto a plate cylinder of a sheet-fed printing press or web-fed printing press and the conductor tracks are printed by applying ink to the printing material indirectly by a rubber-covered cylinder.
- i. However, *Scholz et al* teaches in his reference that the relief printing plate is clamped onto a plate cylinder of a sheet-fed printing press (1:15-24) and the printing is performed by applying ink to the printing material indirectly by a rubber-covered cylinder (3:61-67; the examiner notes that *Scholz et al* discloses the claimed invention except for a relief printing plate clamped to a web-fed printing press; however, it would have been obvious to one having



ordinary skill in the art at the time the invention was made to replace a sheet-fed printing press with a web-fed printing press because these presses are known equivalents). The advantage of using a relief printing plate clamped to a plate cylinder of a sheet-fed or web-fed printing press is to take advantage of a printing process that it is a well known.

- b. Regarding claim 47, in addition to the limitations in claim 46, *Brady et al* as modified does not expressly disclose in his reference that the relief printing plate is used in a printing press which also comprises offset printing units.
  - i. However, *Scholz et al* teaches that the relief printing plate is used in a printing press which also comprises offset printing units (3:6-14). The advantage of using an offset printing process is to take advantage of a printing process that is well known and produces high image quality. Therefore, it would have been obvious to use an offset printing process to take advantage of a printing process that is well known and produces high image quality.
- c. Regarding claim 48, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the relief printing plate is used in a printing press which also comprises offset printing units.
  - i. However, *Scholz et al* teaches in his reference that the relief plate is in further contact with the printing material in a sheet-fed or web-fed printing press (3:6-14). The advantage of using a direct printing process is to take advantage of a printing process that is well known. Therefore, it would have been obvious to use a direct printing process to take advantage of a printing process that is well known.

- d. Regarding claim 49, in addition to the limitations in claim 48, *Brady et al* as modified does not expressly disclose in his reference that the relief printing plate is used in a printing press which also comprises offset printing units.
- i. However, *Scholz et al* teaches in his reference that the relief printing plate is used in a printing press which also comprises offset printing units (3:6-14). The advantage of using an offset printing process is to take advantage of a printing process that is well known and produces high image quality. Therefore, it would have been obvious to use an offset printing process to take advantage of a printing process that is well known and produces high image quality.

**Claims 50-52** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) as modified by *Howard et al* (US Patent 6,614,392) and *Yokota* (US Patent 7,029,825) as applied to claim 45 above and further in view of *Vega et al* (US Patent 6,265,977).

- a. Regarding claim 50, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the printing material is a fibrous material.
- i. However, *Vega et al* teaches in his reference that the printing material is paper (5:9-21; the examiner notes that paper is known to be a fibrous material). The advantage of utilizing paper is to print on a substrate that is inexpensive and commonly used. Therefore, it would have been obvious to utilize paper to print on a substrate that is inexpensive and commonly used.

- b. Regarding claim 51, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the printing material is a film.
  - i. However, *Vega et al* further teaches in his reference that the printing material is a polymer (5:9-21; the examiner notes that polymers are known to be films). The advantage of utilizing a film is to print conductive traces on a reusable and durable substrate (5:17-21). Therefore, it would have been obvious to utilize a film to print conductive traces on a reusable and durable substrate.
- c. Regarding claim 52, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the printing material is a woven fabric made from at least one of natural and synthetic fibers.
  - i. However, *Vega et al* further teaches in his reference that the printing material is polyester (5:9-21; the examiner notes that polyester is known to be a woven fabric material made of synthetic fibers). The advantage of utilizing a woven fabric is to print on a substrate that is reusable and durable. Therefore, it would have been obvious to utilize a woven fabric to print on a substrate that is reusable and durable.

**Claim 53** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Yokota* (US Patent 7,025,825) and further in view of *Gron et al* (US Patent 6,712,931).

- a. Regarding claim 53, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the printing material is an absorbent printing material, the method further comprising one of precoating, prevarnishing or preprinting the printing materials with a

varnish or a preprinting ink to reduce absorption properties of the printing material.

- i. However, *Gron et al* teaches in his reference that the printing material is an absorbent printing material, the method further comprising one of precoating, prevarnishing or preprinting the printing materials with a varnish or a preprinting ink to reduce absorption properties of the printing material (3:50-4:15). The advantage of utilizing a precoating is to reduce absorption properties of the printing material (3:61-66). Therefore, it would have been obvious to utilize a precoating to reduce absorption properties of the printing material.

**Claim 54** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Yokota* (US Patent 7,029,825), and *Gron et al* (US Patent 6,712,931) and further in view of *Yoshida et al* (US Patent 4,933,123).

- a. Regarding claim 54, in addition to the limitations in claim 53, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevarnishing, or preprinting is performed by a direct letterpress printing unit.
  - i. However, *Yoshida et al* teaches in his reference applying ink utilizing a direct letterpress printing unit (5:54-57). The advantage of utilizing a direct letterpress unit is to utilize a well-known process. Therefore, it would have been obvious to utilize a direct letterpress unit to utilize a well-known process.

**Claim 55** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Yokota* (US

Patent 7,029,825), and *Gron et al* (US Patent 6,712,931) and further in view of *Horiguchi et al* (US Patent 5,617,788).

- a. Regarding claim 55, in addition to the limitations in claim 53, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevamishing or preprinting includes applying the varnish or ink using a relief printing plate and a rubber-covered cylinder.
- i. However, *Horiguchi et al* teaches in his reference that the step of precoating, prevamishing or preprinting includes applying the varnish or ink using a relief printing plate and a rubber-covered cylinder (1:45-50). The advantage of precoating utilizing a relief printing plate is to utilize a printing process that it is well known. Therefore, it would have been obvious to precoat utilizing a relief printing plate to utilize a printing process that it is well known.

**Claim 56** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392), *Yokota* (US Patent 7,029,825), and *Gron et al* (US Patent 6,712,931) and further in view of *Vega et al* (US Patent 6,265,977).

- a. Regarding claim 56, in addition to the limitations in claim 53, *Brady et al* as modified does not expressly disclose in his reference that the step of precoating, prevamishing or preprinting includes applying the varnish or ink using an offset printing unit.
- i. However, *Vega et al* teaches in his reference that the step of precoating, prevamishing or preprinting includes applying the varnish or ink using an offset printing unit (7:18-26). The advantage of precoating utilizing offset printing is to utilize a printing process that it is well known. Therefore, it would have been

obvious to precoat utilizing offset printing to utilize a printing process that it is well known.

**Claim 57** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Yokota* (US Patent 7,029,825) and further in view of *Shoobridge et al* (US Patent 6,603,400).

- a. Regarding claim 57, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the step of printing two lines next to one another over a distance to produce a capacitive element, the lines being connected to one another at the ends of a short line of the two lines.
- i. However, *Shoobridge et al* teaches in his reference that the step of printing two lines next to one another over a distance to produce a capacitive element, the lines being connected to one another at the ends of a short line of the two lines (1:57-2:11; Fig. 2). The advantage of printing capacitors is to avoid the step of attaching a capacitor to the substrate. Therefore, it would have been obvious to print capacitors to avoid the step of attaching a capacitor to the substrate.

**Claim 58** is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brady et al* (US Patent 6,259,408) in view of *Howard et al* (US Patent 6,614,392) and *Yokota* (US Patent 7,029,825) and further in view of *Redinger et al* (non-patent literature).

- a. Regarding claim 58, in addition to the limitations in claim 45, *Brady et al* as modified does not expressly disclose in his reference that the step of producing a capacitive element by printing a base line on the printing material, printing an insulator, and printing a complementary line on the

insulator so that the insulator is arranged between the base line and the complementary line.

- i. However, *Redinger et al* teaches in his reference that the step of producing a capacitive element by printing a base line on the printing material, printing an insulator, and printing a complementary line on the insulator so that the insulator is arranged between the base line and the complementary line (*Redinger, J.*, "An all-printed passive component technology for low-cost RFID", Device Research Conference Digest 2003; pp. 187-188). The advantage of printing capacitors and dielectrics is to avoid the step of attaching a capacitor along with a dielectric to the substrate. Therefore, it would have been obvious to print capacitors and dielectrics to avoid the step of attaching a capacitor along with a dielectric to the substrate.

#### **Response to Arguments**

The applicant first argues with respect to claim 25-44 that the references do not teach "printing conductor tracks on a printing material by sheet-fed **offset** printing" (Applicant's Remarks, 11:4-6; emphasis added). However, the examiner disagrees. *Babb* does teach offsetting conductive ink onto a substrate. Further, it is noted that the features upon which applicant relies (i.e., "the inked image is transferred (or 'offset') from a plate to a rubber blanket, then to the printing surface," Applicant's Remarks, 12:16-18)) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims are examined in view of their broadest reasonable interpretation. As stated in the prior Office Action, the applicant is encouraged to add limitations to the claims describing these terms in more detail to more clearly define his invention. However, to this point,

the applicant has refused to amend the claims to more clearly define the term "offset." If the applicant's intent is for the applicant's invention to read only on "offset printing" as defined in the Applicant's Remarks, then the applicant will take no issue in amending the claims appropriately.

In addition, the applicant argues that "the Examiner's 'Response to Arguments' to mean that none of the cited references teach or suggest 'printing conductor tracks on a printing material by sheet-fed offset printing'" (Applicant's Response, 13:21-23). However, the applicant is misinterpreting the examiner's argument. The examiner believes that there are too many portions of each reference that read on the term "offset." Therefore, the examiner maintains that the applicant should further limit the claim to describe the term "offset printing."

The applicant second argues with respect to claim 45 that "*Yokota* has been misinterpreted and combining *Yokota* with *Brady* and *Howard*" because "there is no suggestion that a conductor track for an antenna or a tuned circuit can be applied by a relief printing plate" (Applicant's Response, 15:22-23 and 16:1-2). However, the examiner holds that it would have been obvious to one skilled or even unskilled in the art that an antenna or a tuned circuit can be made by any type of printing process. Therefore, the examiner maintains this rejection.

In addition, the applicant argues a passage that was not cited by the examiner (Applicant's Response, 16:3-8). Please review *Yokota et al* (US Patent 7,029,825; 38:3-8) and take note to the arguments made above.



**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Angwin whose telephone number is 571-270-3735. The examiner can normally be reached on 7:30 AM - 5 PM (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant, can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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DPA